

INTERNATIONAL SEARCH REPORT

International Application No
PC 03/02488

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B23Q1/00
B28D1/04

B23Q11/00

B23Q11/10

B28D7/02

E21B21/02

10/517128

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B23Q B28D E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 168 753 A (RAIBETANZ WILBERT ET AL) 25 September 1979 (1979-09-25) the whole document	84-91
P, X	PATENT ABSTRACTS OF JAPAN vol. 2003, no. 08, 6 August 2003 (2003-08-06) -& JP 2003 097178 A (SHOKO SANGYO KK), 3 April 2003 (2003-04-03) abstract; figures 6,8	1-9, 12-18, 20-27, 30-37, 64-74, 79-81
A	DE 297 24 568 U (VERWEYEN ULRICH) 14 February 2002 (2002-02-14) page 1, line 11 - line 15 figure 4 -/-	89, 90

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

12 September 2003

Date of mailing of the international search report

29/09/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Breare, D

INTERNATIONAL SEARCH REPORT

Interr 1al Application No
PC 8 03/02488

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 888 031 A (KABATNIK WILFRIED ET AL) 30 March 1999 (1999-03-30) column 1, line 6 - line 10 column 2, line 19 - line 49 column 2, line 62 - line 64 column 3, line 33 -column 4, line 11 column 5, line 48 - line 57 figures 1,4,6-8	1
A	GB 2 324 486 A (MARCRIST IND LTD) 28 October 1998 (1998-10-28) page 4, line 7 -page 5, line 7 figure 1	84,89,90
A	DE 30 49 268 A (RADA OSWALD) 29 July 1982 (1982-07-29) page 4, line 6 -page 5, last line figures	89,90
A	US 4 036 308 A (DELLENBERG HUGO) 19 July 1977 (1977-07-19) the whole document	1
A	DE 38 41 871 A (BIEDRON BSB) 21 June 1990 (1990-06-21) the whole document	1

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB 03/02488

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-83

Drill attachment with housing having two conduits and drive shaft with two end portions each of which is in fluid communication with one of said conduits enabling the optimisation of fluid transfer for both wet and dry drilling using the same adapter.

2. Claims: 84-91

Drill attachment with chamber defined by housing and drive shaft having opening in selective fluid communication with fluid conduit in housing enabling the optimisation of fluid transfer between the tool and the fluid conduit for large and small tools whilst using the same adapter.

INTERNATIONAL SEARCH REPORT

Internat'l Application No

PCT/83 03/02488

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4168753	A	25-09-1979	DE 2705082 A1 CH 622736 A5	10-08-1978 30-04-1981
JP 2003097178	A	03-04-2003	NONE	
DE 29724568	U	14-02-2002	DE 19749835 A1 DE 29724568 U1 WO 9924200 A1	20-05-1999 14-02-2002 20-05-1999
US 5888031	A	30-03-1999	DE 19619023 A1 CH 692483 A5 GB 2312860 A ,B JP 10071515 A	13-11-1997 15-07-2002 12-11-1997 17-03-1998
GB 2324486	A	28-10-1998	DE 19818284 A1	29-10-1998
DE 3049268	A	29-07-1982	AT 367681 B DE 3049268 A1 AT 775379 A	26-07-1982 29-07-1982 15-12-1981
US 4036308	A	19-07-1977	DE 2417228 A1	06-11-1975
DE 3841871	A	21-06-1990	DE 3841871 A1	21-06-1990